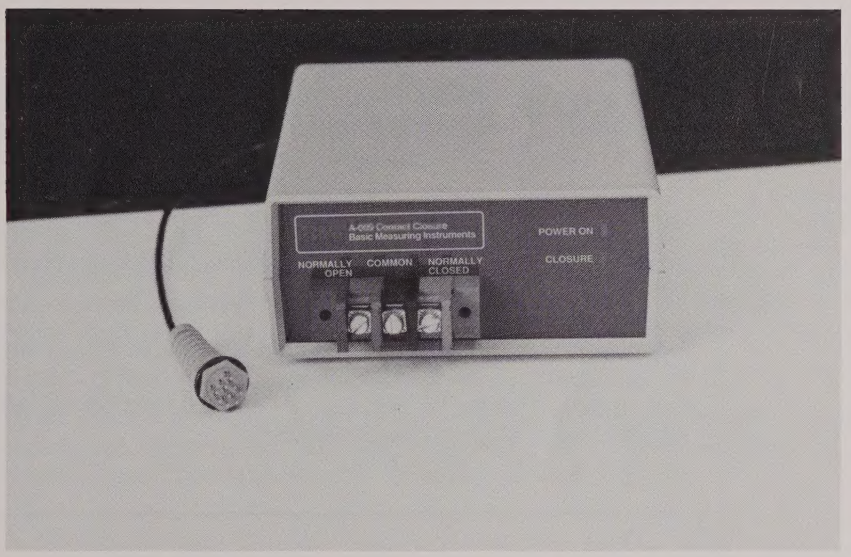


A-009 Contact Closure Probe

The A-009 Contact Closure Probe connects to the BMI PowerScope, and provides a 2-second contact closure signal for beepers, security systems, attention lights, emergency shutdown devices or other systems for signaling power disturbances.

BMI Basic Measuring Instruments

The Contact Closure Probe

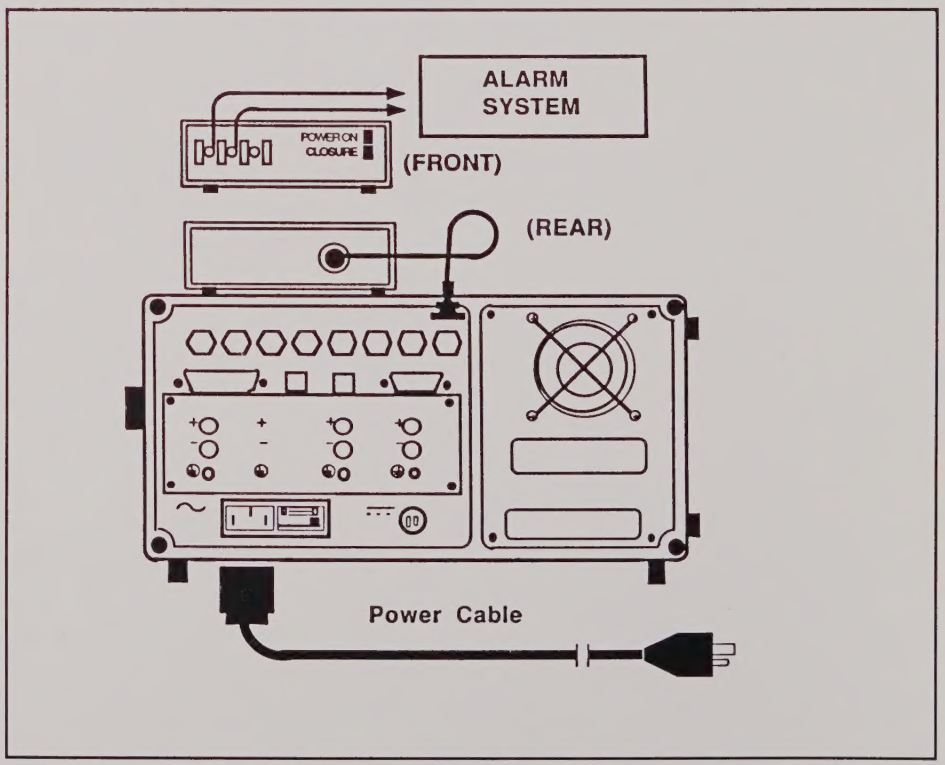
The A-009 Contact Closure Probe connects to the BMI PowerScope. It can trigger an alarm system, attention light or other warning system whenever a disturbance is recorded.

The probe contains three terminals: the NORMALLY OPEN, the COMMON, and the NORMALLY CLOSED terminal. The normally open contact will close for two seconds, and the normally closed will open for two seconds whenever the PowerScope detects an out-of-tolerance condition.

Connecting the Probe

To connect the A-009 Contact Closure Probe to the PowerScope, simply plug the nine pin connector into any environmental channel on the rear panel of the PowerScope.

Connect the Contact Closure Probe to a circuit being activated. Use the NORMALLY OPEN and the COMMON terminal to close the circuit during a disturbance. Use the NORMALLY CLOSED and the COMMON terminal to interrupt a circuit during a disturbance.



Typical wiring schematic for triggering a normally open circuit.

Setting up the PowerScope

The A-009 Contact Closure Probe is controlled by settings on both the Setup Menu and the Report Menu. The Setup Menu determines the thresholds at which a disturbance will be recorded, and the Report Menu controls which monitoring functions are active.

Summary Reports, Threshold Reports, Initial Waveshape Reports, and Strip Charts will NOT activate the Contact Closure Probe. The Probe will be activated whenever thresholds are exceeded for the following: Rms voltage, impulse disturbances, high frequency noise, frequency deviations, waveshape faults, and any environmental probes where threshold limits are exceeded. Any of these functions can be turned off by settings in the Report Menu.

Probes plugged into the environmental channels will add questions to the report menu. As an example, the Temperature Probe will prompt you with the following options: Both, 1 Hr (or 3, 6, 12, 24 Hr), Text, or Off. The Both and Text options will activate the Contact Closure Probe. The "Off" selection will prevent contact closure when the Temperatuire Probe exceeds threshold settings.

There are no new questions added to the Setup or Report menus by the Contact Closure Probe. Remember, however, when setting thresholds, that any disturbance recorded will activate the Contact Closure Probe.

Setup Example

The Contact Closure Probe is activated whenever a disturbance is recorded, either on a main channel or an environmental probe. The PowerScope user will want to selectively adjust the conditions that will trigger contact closure. This is accomplished through a combination of Setup Menu thresholds, and Report Menu selections.

Example. An engineer is monitoring a power supply in a shed that is subject to high temperatures. He wants to be alerted if ever there is a drop in voltage below 100 volts, or if the temperature is 105 degrees or warmer. Other conditions, such as impulses, are important, but he does not need to be alerted for these.

The first step is to set thresholds in the normal fashion, setting the sag Rms threshold to 100 volts, and the high Temperature to 105 degrees. In the Report Menu, for LINE-NEUT Rms he selects Both, which will provide both graphs of disturbances, 12 hour strip charts of Rms voltage, and the Contact Closure Probe will sound an alarm for voltage under 100. For the LINE-NEUT Impulse report he selects the 12 hour strip chart only. This will provide a record of impulses, but will not sound the alarm. For the same reason he selects only the 12 hour strip charts for High Frequency Noise and Frequency disturbances. The Waveshape fault detector is turned off.

The Temperature Probe is set to trip the alarm by selecting the Both option, that is both strip charts and text reports. With this combination of settings the engineer can monitor a variety of conditions and be alerted by the Contact Closure probe to situations of vital interest.

Specifications

Signal Output:
2-second contact closure for normally open terminal
2-second contact open for normally closed terminal
Occurs whenever a disturbance is recorded, on either the main channels, or on environmenal probes.

Contact Ratings:
125VAC at 0.5 amps
30 VDC at 2.0 amps

Terminals:
18-22 gauge screw type

Dimensions:
Length 5.25 in (13.3 cm), Width 5.1 in (13 cm), Height 2.25 in (5.7 cm)
Weight 13 oz (360 g)
Cable 10 ft (3m)

BMI
Basic Measuring Instruments
335 Lakeside Drive
Foster City, CA 94404
Tel: 415/ 570-5355
TWX: 910/ 374-3059

Part Number 89001759